



August 17, 2016

PG&E Letter DCL-16-081

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

10 CFR 50.90

Docket No. 50-275, OL-DPR-80

Docket No. 50-323, OL-DPR-82

Diablo Canyon Units 1 and 2

Submittal of Documents for the License Amendment Request for Process Protection
System Replacement

- References:
1. PG&E Letter DCL-11-104, "License Amendment Request 11-07, Process Protection System Replacement," dated October 26, 2011 (ADAMS Accession No. ML11307A331)
 2. NRC Letter, "Summary of August 5, 2015, Teleconference Meeting with Pacific Gas and Electric Company on Digital Replacement of the Process Protection System Portion of the Reactor Trip System and Engineered Safety Features Actuation System at Diablo Canyon Power Plant, Unit Nos. 1 and 2 (TAC NOS. ME7522 AND ME7523)," dated September 10, 2015 (ADAMS Accession No. ML15233A006)

Dear Commissioners and Staff:

In Reference 1, Pacific Gas and Electric Company (PG&E) submitted License Amendment Request 11-07 to request the NRC Staff (Staff) approval to replace the Diablo Canyon Power Plant (DCPP) Eagle 21 digital process protection system (PPS) with a new digital PPS that is based on the Invensys Operations Management Tricon Programmable Logic Controller, Version 10, and the Westinghouse Electric Company Advanced Logic System.

This letter submits information from three PPS Replacement Project documents requested to be submitted by the NRC in Reference 2:

- System Level Requirements Traceability Matrix, Revision 0
- System Level Failure Modes & Effects Analysis, Revision 0
- PPS Seismic Qualification

ADD1
NRR



The Staff requested that the documents contained in the compact disc (CD) in Attachment 1 to this letter be submitted in Open Items 101, 145, 149, and 153 contained in Enclosure 2 of Reference 2.

A copy of the CD will be provided to the following individuals:

- Regional Administrator, Region IV
- DCPN Nuclear Reactor Regulation Project Manager
- DCPN NRC Senior Resident Inspector
- Branch Chief, California Department of Public Health

The information in the Enclosure in this submittal does not affect the results of the technical evaluation or the significant hazards consideration determination previously transmitted in Reference 1.

PG&E makes no new or revised regulatory commitments (as defined by NEI 99-04) in this letter.

If you have any questions, or require additional information, please contact Mr. Hossein Hamzehee at (805) 545-4720.

I state under penalty of perjury that the foregoing is true and correct.

Executed on August 17, 2016.

Sincerely,

James M. Welsch
Vice President, Nuclear Generation

kjse/4328/50271918

Enclosure

cc: Diablo Distribution
cc/enc: Marc L. Dapas, NRC Region IV
Gonzalo L. Perez, Branch Chief, California Department of Public Health
John P. Reynoso, NRC Acting Senior Resident Inspector
Balwant K. Singal, NRR Project Manager

**Submittal of Tricon Phase 2 Documents for the License Amendment Request
for Process Protection System Replacement**

Pacific Gas and Electric Company (PG&E) Letter DCL-11-104, "License Amendment Request 11-07, Process Protection System Replacement," dated October 26, 2011, submitted License Amendment Request 11-07 to request NRC Staff (Staff) approval to replace the Diablo Canyon Power Plant (DCPP) Eagle 21 digital process protection system (PPS).

Attachment 1 to the Enclosure of this letter contains the PPS Replacement project System Level Requirements Traceability Matrix and System Level Failure Modes and Effects Analysis documents, and key excerpts from the PPS Replacement Seismic Qualification. The Staff requested that information from these documents be submitted in Open Items 101, 145, 149, and 153 contained in NRC Letter, "Summary of August 5, 2015, Teleconference Meeting with Pacific Gas and Electric Company on Digital Replacement of the Process Protection System Portion of the Reactor Trip System and Engineered Safety Features Actuation System at Diablo Canyon Power Plant, Unit Nos. 1 and 2 (TAC NOS. ME7522 AND ME7523)," dated September 10, 2015. The documents are summarized in Table 1 below and are contained in the compact disc (CD) in Attachment 1.

The seismic analyses of the PPS replacement equipment are contained in Sargent and Lundy Calculation 9000041947, "PPS Seismic Qualification." The seismic analyses were performed using the SAP2000 computer code, which is a general purpose linear and nonlinear finite element program for static and dynamic analysis that is referenced in the DCPP Updated Final Safety Analysis Report as a computer program used in current licensing basis static and dynamic analyses. The seismic analyses considered the design basis earthquakes for DCPP and the resulting motions at the locations in which the PPS replacement equipment is to be installed. The results of the seismic analysis for the existing PPS Replacement equipment cabinets, that are modified with additional bracing and plate members, concluded that the test response spectra equipment bound the in-equipment response spectra for the frequencies of interest.

Key excerpts from the PPS Seismic Qualification calculation are contained in Attachment 1 to the Enclosure. The key excerpts from the PPS Seismic Qualification calculation include:

- Purpose, assumptions, inputs, methodology, calculations, conclusions, and references
- Attachment J – Modification Sketches
- Attachment V – Component Qualification, Figures V-1 through V-30C (test response spectra versus in-equipment response spectra)
- Attachment W – Miscellaneous Component Evaluations

Table 1
Attachment 1 - CD Content "PPS Replacement Documents"

File Description	Filename [size MB]
System Level Requirements Traceability Matrix (RTM), 15-0681-RTM-001, Revision 0	RTM [1.8]
System Level Failure Modes & Effects Analysis (FMEA), 15-0681-FMEA-001, Revision 0	FMEA [4.2]
Key Excerpts from PPS Seismic Qualification, 9000041947	Seismic Qualification [4.5]